

Abstract of the Disclosure

Novel polypeptides or derivatives comprising the factor VIIIa binding site on factor IXa are disclosed. The novel polypeptides or derivatives have anti-coagulation activity. Nucleic acids encoding those polypeptides are also disclosed. Methods for identifying an agent having anti-coagulation activity are also disclosed. These methods comprise determining whether the agent displaces the polypeptide or derivative from its factor VIIIa binding site. The agent identified in these methods is also useful in methods for treating a patient to prevent thrombosis. The treatment methods comprise administration of the agent to the patient. Additional methods are also disclosed for treating a patient to prevent thrombosis, comprising treating the patient with a polypeptide or derivative comprising the factor VIIIa binding site on factor IXa. Methods of preventing coagulation in a blood sample are also disclosed, comprising adding the polypeptides or derivatives described above to the blood sample. Methods of detecting factor VIIIa in a sample are also disclosed. Those methods comprise contacting the sample with the above-described polypeptide or derivative, wherein the polypeptide or derivative also comprises a covalently attached detectable moiety, then determining whether the polypeptide or derivative is binding factor VIIIa from the sample.